Amendments to the Claims

1. (Currently amended) A light-emitting diode characterized by comprising:

an electron injecting electrode, that is, an n-electrode;

a hole injecting electrode, that is, a p-electrode; and

an inorganic light-emitting layer, wherein the inorganic light-emitting layer (1) is formed of an inorganic semiconductor material formed on a glass substrate and having an ambipolar property in which the ratio of respective mobilities of electrons and holes is in a range of 1/10 to 10, (2) is disposed between the n-electrode and the p-electrode so as to respectively contact the n-electrode and the p-electrode in a non-barrier junction manner such that the inorganic semiconductor material conducts both electrons injected from the n-electrode and holes injected from the p-electrode, and (3) has a thickness in a range of 100 nm or more and 10 μm or less,

wherein the inorganic light-emitting layer emits light resulting from electrons injected from the n-electrode and holes injected from the p-electrode recombining between the two electrodes, and

wherein the inorganic semiconductor material formed on the glass substrate and having the ambipolar property is selected from the group consisting of (a) a group II-VI compound and (b) Zn and at least one element selected from the group consisting of S, Se and Te.

2. (Previously presented) The light-emitting diode according to claim 1, characterized in that

the inorganic light-emitting layer consists of a semiconducting material having a dopant concentration of 0.1% or less in atomic ratio.

3. (Canceled)

4. (Previously presented) The light-emitting diode according to claims 1 or 2, characterized in that

the n-electrode includes a layer comprising an n-type dopant and the inorganic semiconductor material having the ambipolar property.

5. (Previously presented) The light-emitting diode according to claims 1 or 2, characterized in that

the p-electrode includes a layer comprising a p-type dopant and the inorganic semiconductor material having the ambipolar property.

6. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

the n-electrode includes a first layer comprising ~~comprising~~ an n-type dopant and the inorganic semiconductor material having the ambipolar property, and the p-electrode includes a second layer comprising a p-type dopant and the inorganic semiconductor material having the ambipolar property.

7. (Previously presented) The light-emitting diode according to claims 1 or 2, characterized in that

a material of a portion contacting the light-emitting layer in at least one of the n-electrode and the p-electrode is formed by use of a material substantially different from the

material of the light-emitting layer.

8. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

~~the inorganic semiconductor material having the ambipolar property is formed on a crystalline substrate or a glass substrate, and~~ the n-electrode and the p-electrode are formed on opposing sides of the inorganic semiconductor material having the ambipolar property, wherein the n-electrode and the p-electrode do not contact each other.

9. (Currently amended) The light-emitting diode according to claims 1 or 2, characterized in that

a first one of the n-electrode and the p-electrode is formed on ~~a crystalline substrate or a~~ the glass substrate, and the inorganic semiconductor material having the ambipolar property is stacked thereon, and a second one of the p-electrode and the n-electrode is stacked thereon.

10 -- 11. (Canceled)

12. (Previously presented) The light emitting diode according to claim 1, wherein only one such light-emitting layer is formed between the p-electrode and the n-electrode.

13. (Currently amended) A light-emitting diode, comprising:

an electron injecting n-electrode;

a hole injecting p-electrode;

an ambipolar light-emitting layer (1) continuously extending from the n-electrode to

the p-electrode, (2) consisting of an ambipolar semiconducting material whjch is formed on a glass substrate and which conducts both electrons injected by the n-electrode and holes injected by the p-electrode, (3) having a thickness in a range of equal to or greater than 100 nm and no more than 10 μm, and (4) comprising a first semiconductor material selected form the group consisting of (a) a group II-VI compound and (b) Zn and at least one element selected from the group consisting of S, Se and Te.

14. (Previously presented) The light-emitting diode of claim 13, wherein the ambipolar light-emitting layer consists of the first semiconductor material.

15. (Previously presented) The light-emitting diode of claim 13, wherein the first semiconductor material is Zn and at least one element selected from the group consisting of S, Se and Te.

16. (Canceled)

17. (Previously presented) The light-emitting diode according to claim 1, wherein the light-emitting layer consists essentially of the inorganic semiconductor material having the ambipolar property.

18. (Previously presented) A light-emitting diode characterized by comprising:
an electron injecting electrode, that is, an n-electrode;
a hole injecting electrode, that is, a p-electrode; and
an inorganic light-emitting layer, wherein the light-emitting layer is disposed between

the n-electrode and the p-electrode so as to respectively contact the n-electrode and the p-electrode and is formed of an inorganic semiconductor material having an ambipolar property in which the ratio of respective mobilities of electrons and holes is in a range of 1/10 to 10, and has a thickness in a range of 100 nm or more and 10 μm or less,

wherein the inorganic light-emitting layer emits light resulting from electrons injected from the n-electrode and holes injected from the p-electrode recombining between the two electrodes,

wherein the inorganic semiconductor material having the ambipolar property is selected from the group consisting of (a) a group II-VI compound and (b) Zn and at least one element selected from the group consisting of S, Se and Te,

wherein the n-electrode has a work function lower than a conduction band edge energy of the inorganic semiconductor material having the ambipolar property, and

wherein the p-electrode has a work function higher than a valence band edge energy of the inorganic semiconductor material having the ambipolar property.

19. (Previously presented) The light-emitting diode of claim 18, wherein the inorganic light-emitting layer contacts the n-electrode without forming a barrier therebetween and the inorganic light-emitting layer contacts the p-electrode without forming a barrier therebetween.

20. (Withdrawn) The light-emitting diode of claim 18, wherein the n-electrode comprises Ga-doped ZnO and the p-electrode comprises $CuFeS_2$.

21. (Not entered)

22. (Previously presented) The light-emitting diode of claim 1, wherein the inorganic light-emitting layer contacts the n-electrode without forming a barrier therebetween and the inorganic light-emitting layer contacts the p-electrode without forming a barrier therebetween.

23. (Withdrawn) The light-emitting diode of claim 1, wherein the n-electrode comprises Ga-doped ZnO and the p-electrode comprises $CuFeS_2$.

24. (New) The light emitting diode of claim 18, wherein the work function of the n-electrode and the conduction band edge energy are measured relative to a first common reference energy level associated with the n-electrode and the work function of the p-electrode and the valence band edge energy are measured relative to a second common reference energy level associated with the p-electrode.